

WELL SCHWAB 26 4F

WATERBURY

STATE COLORADO

COUNTY WELD

LOCATION NW/4 NW/4

APR SERIAL NO. 26

SEC 26

4736.0 F

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

Log Measured From KELLY BUSING 3301

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Interpretations are opinions based on electrical and other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone relying on any interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Run No.	ONE
Service Order No.	60488
Drilling Fluid Level	0.0 F
Salinity	800.0 PPM
Rmt & BH T	1301 OHMM
Logging Speed	2.608 CHMM
Tool Joint	3600 C F/H

Tool Number 1	DIS-EC 188
Tool Number 2	DIC-DA 136
Tool Number 3	SGC-SA 760
Tool Number 4	DRS-B 3859
Tool Number 5	NSC-E 2323
Tool Number 6	POD-D 2788
Tool Number 7	GBR - 6840
Tool Number 8	TCC-BB 226
Tool Number 9	BAF-BB 3092
Tool Number 10	TCM-AB 289
Tool Number 11	
Tool Number 12	

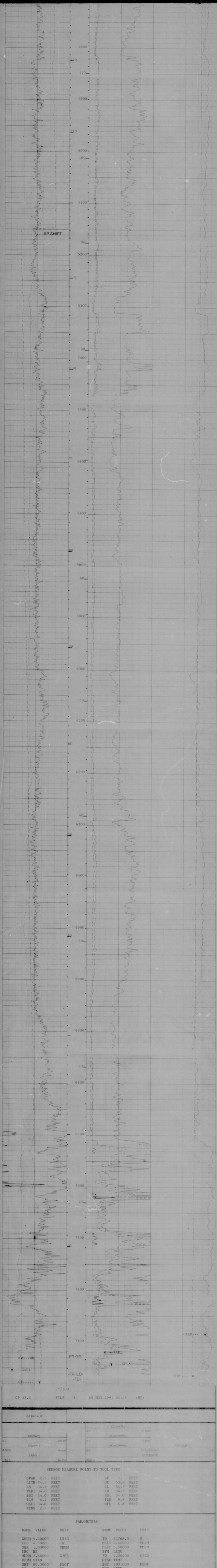
REMARKS:
RIG CAZA #4
SWS CREW: POGORELZ, KINGMAN
LDT/DIT RAN IN COMBO
CALIPER CLOSED @ 3800'
SP SHFT @ 6'50"
1-1/2" STANDOFF ON DUAL

ACCUMULATED INTEGRATION VALUES SUMMARY:	
IHV: 2504.13 F3	FROM 7384.00 F TO 500,000 F
ICV: 1980.70 F3	FROM 7384.00 F TO 500,000 F

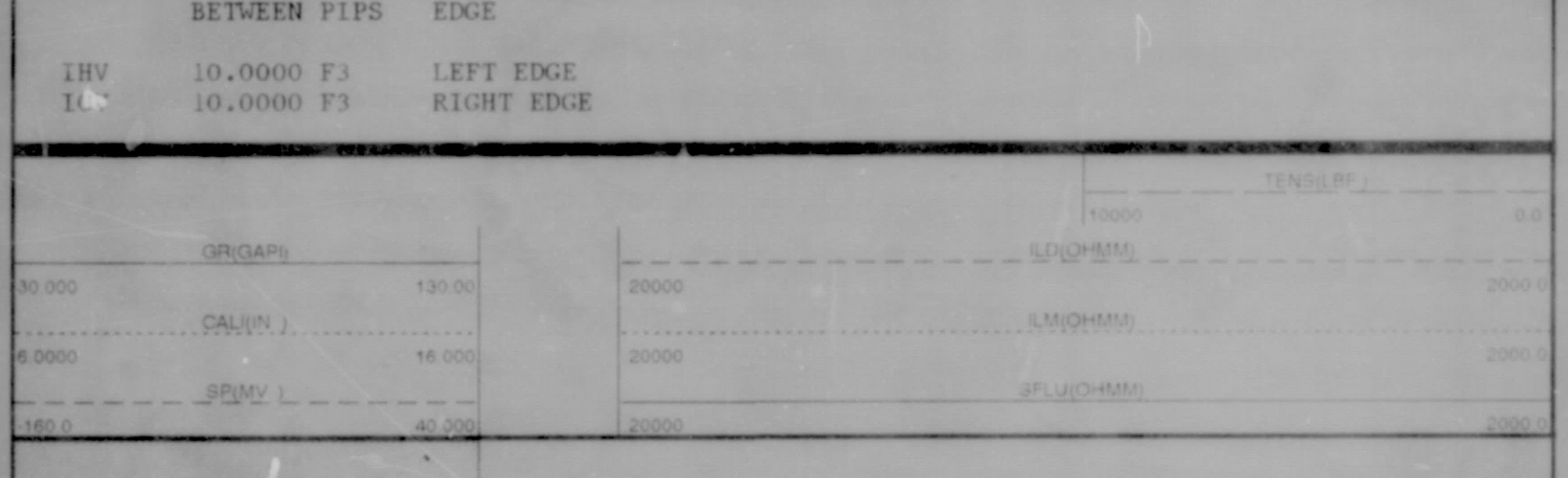
EVENT MARK SUMMARY:	
OUTPUT INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3
ICV	10.0000 F3

CHANGED PARAMETERS	
NAME VALUE UNIT DEPTH (F)	NAME VALUE UNIT DEPTH (F)
MDEN 2.71000 G/G3 7225.5	MDEN 2.68000 G/G3 6561.0





CP 32.4 FILE 5 09-NOV-1991 03:45 (UP)



SENSOR MEASURE POINT TO TOOL ZERO

SPAR 2.5 FEET	SP 2.5 FEET
LITH 34.5 FEET	GR 53.8 FEET
LS 34.5 FEET	IL 34.1 FEET
PAR1 34.0 FEET	LD 34.1 FEET
SS2 34.0 FEET	SS1 34.0 FEET
ILM 6.1 FEET	ILD 9.9 FEET
CALI 34.6 FEET	SFL 6.8 FEET
TENS 2.5 FEET	

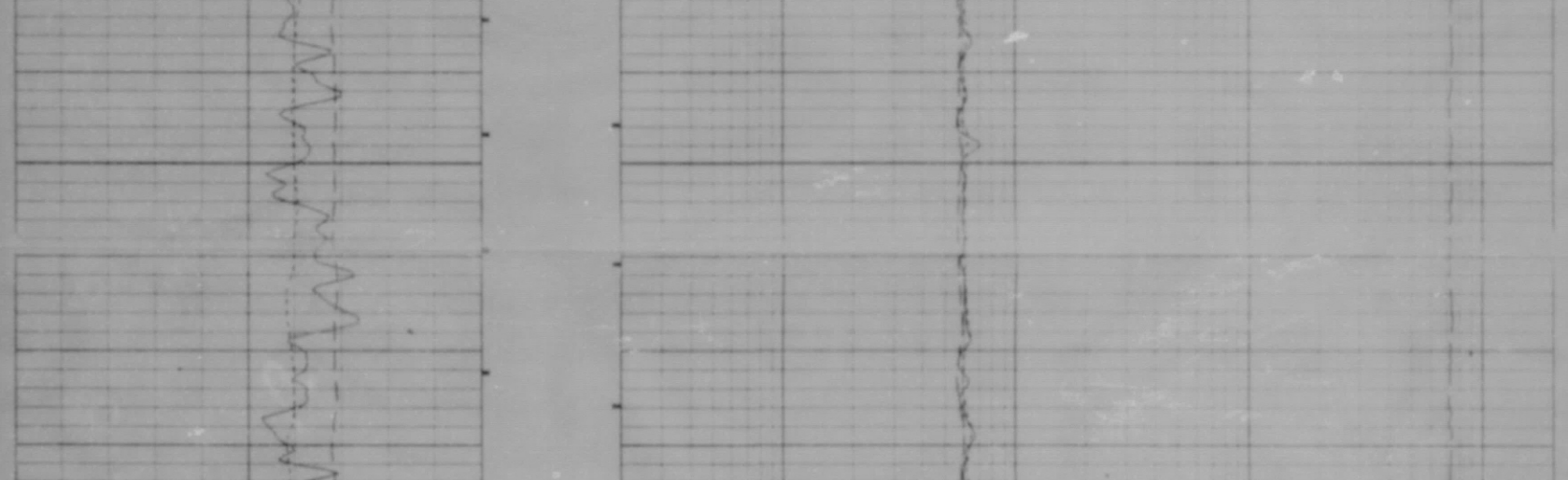
PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
WHD	9.30000	LB/O	TD	32766.0	F
PCD	4.00000	IN	HSEC	4.60000	FT/M
SBR	1.00000	OH/IN	DSEC	5.50000	FT/M
DHC	B5		BPM	LIQU	
DCEN	2.68000	G/C3	FD	1.00000	G/C3
DPM	STAH		GTSE	TEMP	
SHT	80.0000	DEGF	BHT	180.000	DEGF
SS	7.87500	IN	BHS	OPEN	

ACCUMULATED INTEGRATION VALUES SUMMARY:
IHV: 2342.00 F3 FROM 5110.00 F TO 3640.00 F
ICV: 1928.00 F3 FROM 5110.00 F TO 3640.00 F

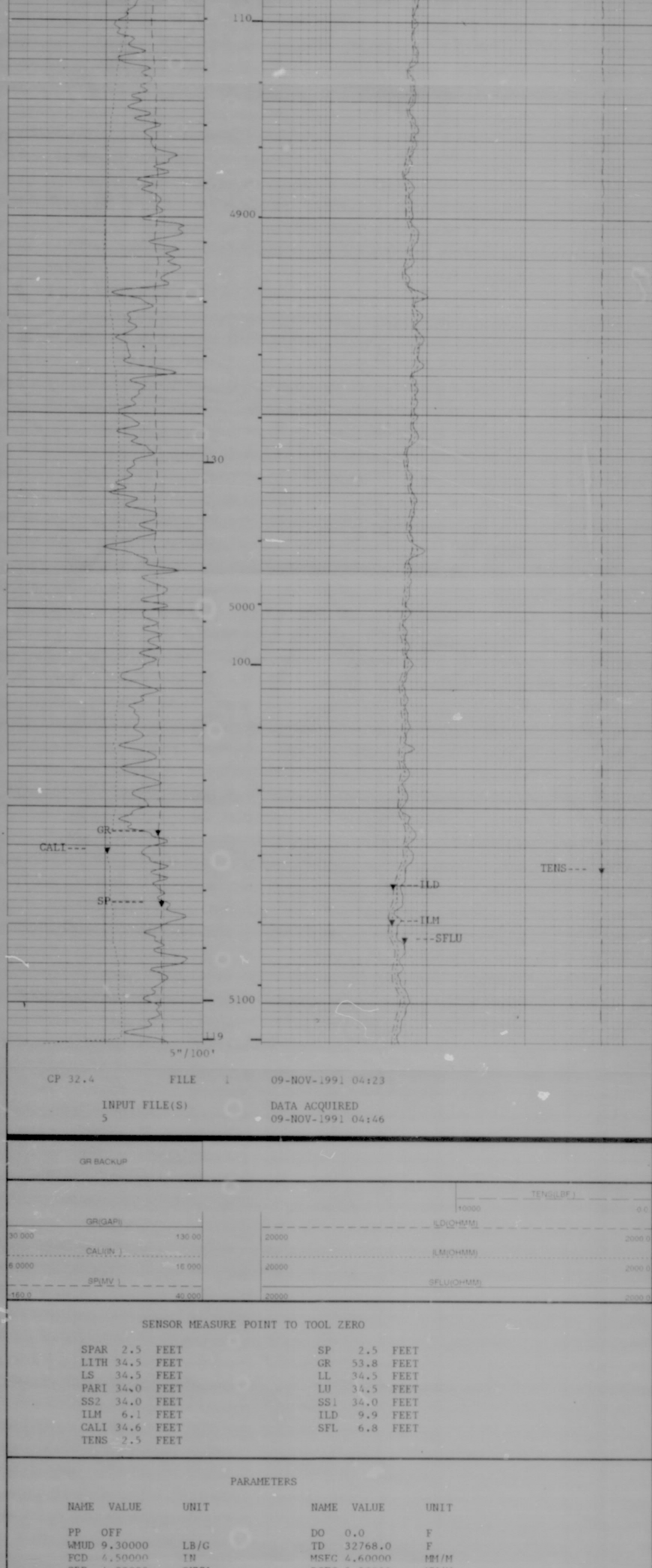
EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE
ICV	10.0000 F3	RIGHT EDGE



CP 32.4 FILE 1 09-NOV-1991 04:27
INPUT FILE(S) 5
DATA ACQUIRED 09-NOV-1991 04:46





CP 32.4 FILE 1 09-NOV-1991 04:23
INPUT FILE(S) DATA ACQUIRED
5 09-NOV-1991 04:16

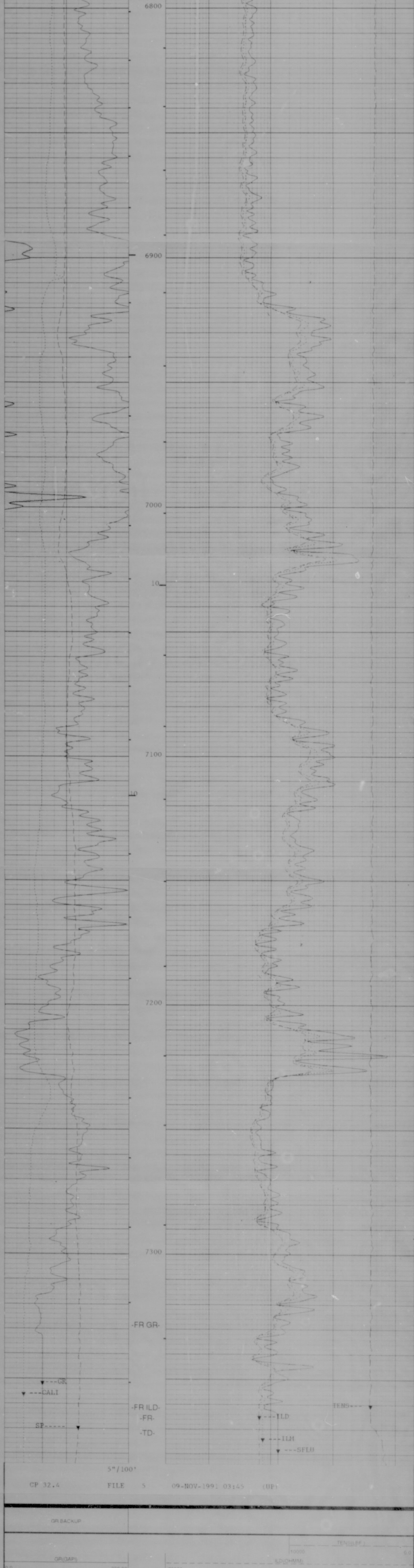
GR BACKUP		TEMPERATURE	
GR/GRAP	130.00	TEMPERATURE	0.0
CAUTION	14.000	TEMPERATURE	2000.0
SP/SPV	40.000	TEMPERATURE	2000.0
GR/GRAP	40.000	TEMPERATURE	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SPAR 2.5 FEET	SP 2.5 FEET
LI 34.5 FEET	GR 53.8 FEET
LS 34.5 FEET	LL 34.5 FEET
PARI 34.0 FEET	LU 34.5 FEET
SS2 34.0 FEET	SS1 34.0 FEET
ILM 6.1 FEET	ILD 9.9 FEET
CALI 34.6 FEET	SFL 6.8 FEET
TENS 2.5 FEET	

PARAMETERS		NAME VALUE UNIT	
PP OFF		DO 0.0	F
WHUD 9.30000	LB/G	TD 32768.0	F
FCD 4.50000	IN	MSEC 4.60000	101/M
SBR 1.00000	OHM	DSEC 5.50000	101/M
DIC BS		BPM LIQU	
MDEN 2.68000	G/C3	FD 1.00000	G/C3
DPM STAN		GTSE TEMP	
SHT 80.0000	DEGF	BHT 180.000	DEGF
BS 7.87500	IN	BHS OPEN	

GR BACKUP		TEMPERATURE	
GR/GRAP	130.00	TEMPERATURE	0.0
CAUTION	14.000	TEMPERATURE	2000.0
SP/SPV	40.000	TEMPERATURE	2000.0
GR/GRAP	40.000	TEMPERATURE	2000.0



CP 32.4 FILE 5 09-NOV-1991 03:45 (UP)

GR BACKUP		TEMPERATURE	
GR/GRAP	130.00	TEMPERATURE	0.0
CAUTION	14.000	TEMPERATURE	2000.0
SP/SPV	40.000	TEMPERATURE	2000.0
GR/GRAP	40.000	TEMPERATURE	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SPAR 2.5 FEET	SP 2.5 FEET
LI 34.5 FEET	GR 53.8 FEET
LS 34.5 FEET	LL 34.5 FEET
PARI 34.0 FEET	LU 34.5 FEET
SS2 34.0 FEET	SS1 34.0 FEET
ILM 6.1 FEET	ILD 9.9 FEET
CALI 34.6 FEET	SFL 6.8 FEET
TENS 2.5 FEET	

PARAMETERS		NAME VALUE UNIT	
WHUD 9.30000	LB/G	TD 32768.0	F
FCD 4.50000	IN	MSEC 4.60000	101/M
SBR 1.00000	OHM	DSEC 5.50000	101/M
DIC BS		BPM LIQU	
MDEN 2.68000	G/C3	FD 1.00000	G/C3
DPM STAN		GTSE TEMP	
SHT 80.0000	DEGF	BHT 180.000	DEGF
BS 7.87500	IN	BHS OPEN	

ACCUMULATED INTEGRATION VALUES SUMMARY:

IRV: 67.2559 F3 FROM 7383.50 F TO 7195.50 F
ICV: 46.9472 F3 FROM 7383.50 F TO 7195.50 F

EVENT MARK SUMMARY:

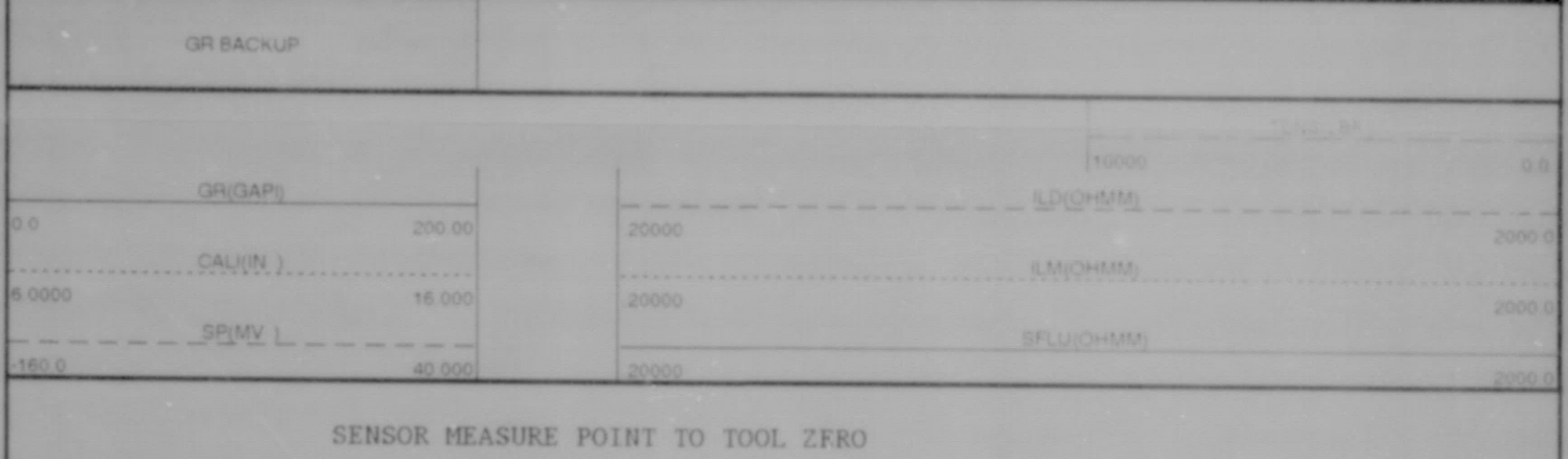
OUTPUT INTERVAL DEPTH TRACK
EDGE
IRV 10.0000 F3 LEFT EDGE
ICV 10.0000 F3 RIGHT EDGE

CHANGED PARAMETERS

NAME	VALUE	UNIT	DEPTH (F)	NAME	VALUE	UNIT	DEPTH (F)
MDEN	2.71000	G/C3	7223.5				

GR BACKUP		TEMPERATURE	
GR/GRAP	130.00	TEMPERATURE	0.0
CAUTION	14.000	TEMPERATURE	2000.0
SP/SPV	40.000	TEMPERATURE	2000.0
GR/GRAP	40.000	TEMPERATURE	2000.0

CP 32.4 FILE 4 09-NOV-1991 03:43 (UP)



REPEAT SECTION 5"/100' CP 32.4 FILE 4 09-NOV-1991 03:39 (UP)

GR BACKUP		TEMPERATURE	
GR/GRAP	130.00	TEMPERATURE	0.0
CAUTION	14.000	TEMPERATURE	2000.0
SP/SPV	40.000	TEMPERATURE	2000.0
GR/GRAP	40.000	TEMPERATURE	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SPAR 2.5 FEET	SP 2.5 FEET
LI 34.5 FEET	GR 53.8 FEET
LS 34.5 FEET	LL 34.5 FEET
PARI 34.0 FEET	LU 34.5 FEET
SS2 34.0 FEET	SS1 34.0 FEET
ILM 6.1 FEET	ILD 9.9 FEET
CALI 34.6 FEET	SFL 6.8 FEET
TENS 2.5 FEET	

PARAMETERS		NAME VALUE UNIT	
WHUD 9.30000	LB/G	TD 32768.0	F
FCD 4.50000	IN	MSEC 4.60000	101/M
SBR 1.00000	OHM	DSEC 5.50000	101/M
DIC BS		BPM LIQU	
MDEN 2.68000	G/C3	FD 1.00000	G/C3
DPM STAN		GTSE TEMP	
SHT 80.0000	DEGF	BHT 180.000	DEGF
BS 7.87500	IN	BHS OPEN	

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 09-NOV-1991 03:39
PROGRAM FILE: GTS (VERSION 32.4 91/03/25 90/06/06)

DITD TOOL CHECK

ZERO		PLUS		UNITS	
BEFORE	AFTER	BEFORE	AFTER		
ILD 0.0	.4	503.8	502.6	101/M	
ILM 0.0	.4	503.3	501.2	101/M	
SFL 0.0	.1	500.0	499.9	101/M	

ILD SONDE ERROR CORRECTION : 5.5 101/M
ILM SONDE ERROR CORRECTION : 4.6 101/M

BEFORE SURVEY: ZERO: 09-NOV-1991 03:17 PLUS: 09-NOV-1991 03:17
AFTER SURVEY CHECK: ZERO: 09-NOV-1991 05:23 PLUS: 09-NOV-1991 05:24

LDTD TOOL CHECK

MEASURED BACKGROUND		TOLERANCE ON	
BEFORE	AFTER	BEFORE-AFTER	
LL 16.8	16.9	CPS +/- 1.0	
LU 65.5	65.2	CPS +/- 1.0	
LS 49.6	49.5	CPS +/- 1.0	
LITH 4.8	4.8	CPS +/- 1.0	
SS1 31.8	31.7	CPS +/- 0.5	
SS2 9.4	9.4	CPS +/- 0.5	

HV SETTINGS DETECTOR RESOLUTIONS
HV LS: 1228.6 V LS: 9.1 E
HV SS: 1363.0 V SS: 9.1 E

BECD BEFORE SURVEY: 09-NOV-1991 02:52 AFTER SURVEY: 09-NOV-1991 03:30
CP 32.4 FILE 7 09-NOV-1991 03:18

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 09-NOV-1991 03:18
PROGRAM FILE: GTS (VERSION 32.4 91/03/25 90/06/06)

DITD ELECTRONICS CALIBRATION SUMMARY

MEASURED		CALIBRATED		UNITS	
ZERO	PLUS	ZERO	PLUS		
ILD .99	530.9	0.0	503.8	101/M	
ILM -.64	519.3	0.0	503.3	101/M	
SFL .29	534.1	0.0	500.0	101/M	

ILD SONDE ERROR CORRECTION : 5.5 101/M
ILM SONDE ERROR CORRECTION : 4.6 101/M

ZERO: 09-NOV-1991 03:17 PLUS: 09-NOV-1991 03:17 COMP: 09-NOV-1991 03:17

SGIL DETECTOR CALIBRATION SUMMARY

MEASURED		CALIBRATED		UNITS	
BECD	JIG	BECD	GAP1		
GR 56	201	165			

BACK: 09-NOV-1991 02:52 JIG: 09-NOV-1991 02:57 COMP: 09-NOV-1991 02:57

LDTD DETECTOR CALIBRATION SUMMARY

MEASURED		SHOP VALUES		UNITS	
BECD	AL+FE	BECD	AL		
LL 16.8	73.7	82.8		CPS	
LU 65.5	107.1	119.7		CPS	
LS 49.6	127.3	142.7		CPS	
LITH 4.8	32.8	30.8		CPS	
SS1 31.8	147.6	166.8		CPS	
SS2 9.4	221.9	243.6		CPS	

HV SETTINGS DETECTOR RESOLUTIONS
HV LS: 1228.6 V LS: 9.1 E
HV SS: 1363.0 V SS: 9.1 E

BECD: 09-NOV-1991 02:52

LDTD CALIPER CALIBRATION SUMMARY

MEASURED		CALIBRATED		UNITS	
SMALL	LARGE	SMALL	LARGE		
CALI 6.72	11.19	8.00	12.00	IN	

SMALL: 09-NOV-1991 02:48 LARGE: 09-NOV-1991 02:44 COMP: 09-NOV-1991 02:45
CP 32.4 FILE 0 09-NOV-1991 03:17

REMARKS:

SHOP CALIBRATION FOR DIT-D #5

SHOP SUMMARY

PERFORMED: 31-OCT-1991 10:36
PROGRAM FILE: SHOP (VERSION 32.4 91/03/25 90/06/06)

LDTD ELECTRONICS CALIBRATION SUMMARY

MEASURED		CALIBRATED		UNITS	
ZERO	PLUS	ZERO	PLUS		
ILD -.59	522.6	0.0	500.0	101/M	
ILM -.53	514.7	0.0	500.0	101/M	
ILD SONDE ERROR CORRECTION : 5.5 101/M					
ILM SONDE ERROR CORRECTION : 4.6 101/M					

(IS: 1189, IC: 1139)

CP 32.4 FILE 1 31-OCT-1991 10:36